

12/11/13 Agenda

- Warm Up
- Review Homework from last night, Worksheet 5.3 day 3
- Section 5.3 day 4
 - Write Equations in Slope-Intercept Form given 2 points.
- Homework - Worksheet 5.3 day 4
- **Quiz TOMORROW - Sections 5.1 & 5.3**
 - Rate of change
 - Slope
 - Slope-Intercept Form of an Equation
 - Rearrange into SIF
 - Write SIF equation given slope & 1 point
 - Write SIF equation given 2 points

Warm Up: Homework Out (WS 5.3 day 3)



Given the slope & point,

write the equations in Slope-Intercept form:

$(1, 4); m = 3$

$y = mx + b$

$y = mx + b$

$4 = 3(1) + b$

$4 = 3 + b$

$\begin{array}{r} -3 \quad -3 \\ \hline 1 = b \end{array}$

$y = 3x + 1$

$(3, 4); m = 2$

$y = mx + b$

$4 = 2(3) + b$

$4 = 6 + b$

$\begin{array}{r} -6 \quad -6 \\ \hline -2 = b \end{array}$

$y = 2x - 2$

5.3 day 3 - Write Equation in SIF Given 2 Points

Target 5C

December 11, 2013

Goal: Given 2 points, write an equation in Slope-Intercept Form.

Formula:

$$y = mx + b$$

Where m = slope and b = y-intercept

POINTS ON LINE

Ex.

Write the equation of a line in slope-intercept form (SIF) given two points on the line.

1. FIND SLOPE
2. FIND b
3. WRITE EQN.

1.) $(-3, -4), (-2, -8)$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-8 - (-4)}{-2 - (-3)} = \frac{-4}{-1} = 4$$

$$y = mx + b$$

$$-8 = -4(-2) + b$$

$$-8 = 8 + b$$

$$-8 - 8 = b$$

$$-16 = b$$

$$y = -4x - 16$$

2.) $(-5, 2), (0, 7)$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{7 - 2}{0 - (-5)} = \frac{5}{5} = 1$$

$$y = mx + b$$

$$2 = 1(-5) + b$$

$$2 = -5 + b$$

$$7 = b$$

$$y = x + 7$$

$$y = x + 7$$

3.) $(-2, 2), (-4, 2)$

4.) $(1, 5), (2, 7)$